

What is claimed is:

1. A scaffold for regenerating a biological tissue by seeding tissue cells onto the scaffold and growing the tissue cells on the scaffold, comprising a semi-permeable membrane  
5 formed on an outer surface thereof.

2. The scaffold as set forth in claim 1, wherein the semi-permeable membrane is made of one selected from among alginates, polysaccharides, chitosan, agar powder and gelatin.

3. The scaffold as set forth in claim 1, wherein the  
10 scaffold comprising a semi-permeable membrane is 1 to 3 mm in size.

4. A method for preparing a scaffold comprising a semi-permeable membrane, comprising:

loading one or more scaffolds into a mold with a  
15 predetermined form and size; and

adding a mixture of a semi-permeable agent and a cross-linking agent to the mold and cross-linking the semi-permeable agent to form the semi-permeable membrane on an outer surface of each of the scaffolds.

20 5. The method as set forth in claim 4, wherein the semi-permeable agent is selected from among alginates,

polysaccharides, chitosan, agar powder and gelatin.

6. The method as set forth in claim 4, wherein the cross-linking agent is selected from among calcium chloride, tripolyphosphate and glutaraldehyde.

5           7. The method as set forth in claim 4, wherein the mold is made of Teflon.

8. A method of preparing a biological tissue, comprising:  
seeding cells obtained from a tissue to be regenerated  
onto one or more scaffolds;

10           loading the scaffolds seeded with the tissue cells into a molding container with a predetermined form and size;

          adding a semi-permeable agent and a cross-linking agent to the molding container and forming a semi-permeable membrane on an outer surface of each of the scaffolds loaded in the molding  
15           container to interconnect the scaffolds; and

          introducing nutrients into the scaffolds interconnected with the cross-linking agent, thus proliferating the tissue cells.

          9. The method as set forth in claim 8, wherein the semi-permeable agent is selected from among alginates, polysaccharides, chitosan, agar powder and gelatin.

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10. The method as set forth in claim 8, wherein the cross-linking agent is selected from among calcium chloride, tripolyphosphate and glutaraldehyde.

11. The method as set forth in claim 8, wherein the mold  
5 is made of Teflon.

12. A biological tissue prepared using the scaffold comprising the semi-permeable membrane according to any one of claims 1 to 3.

13. A biological tissue prepared by the method according  
10 to any one of claims 8 to 11.